

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appl. No. : 10/729,428 Confirmation No. 8412  
Applicant : Eckroad, Steven  
Filed: : December 5, 2003  
Title: : INTEGRATED CLOSED LOOP CONTROL METHOD AND APPARATUS FOR COMBINED UNINTERRUPTIBLE POWER SUPPLY AND GENERATOR SYSTEM  
TC/A.U. : 2836  
Examiner : Cavallari, Daniel J.  
Docket No. : 1036/3US  
Customer No. : 68553

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION UNDER 37 C.F.R. §1.131**

Dear Sir:

I, Steven Eckroad, an inventor in the above-identified patent application, hereby declare as follows:

1. That prior to September 9, 2000, the invention disclosed in the above-referenced application was conceived.
2. That on September 9, 2000, I submitted an Invention Disclosure for the above-referenced application to the Manager of Patents and Licensing at Electric Power Research Institute, Inc. (EPRI), the assignee, and that the Disclosure was signed as being read and understood by a witness on September 27, 2000. See Exhibit A.

3. That on October 12, 2000, the Disclosure was received by EPRI's legal department, as shown by the stamp on Exhibit A.

4. That on October 18, 2000, EPRI forwarded the Disclosure to the law firm Flehr, Hohback, Test, Albritton & Herbert LLP for a prior art search and opinion. See Exhibit B.

5. That on December 4, 2000, Flehr, Hohback, Test, Albritton & Herbert LLP forwarded the results of the prior art search to EPRI. See Exhibit C.

6. That on December 8, 2000, EPRI instructed Flehr, Hohback, Test, Albritton & Herbert LLP to prepare and file a patent application based on the Disclosure. See Exhibit D.

7. That on February 16, 2001, a first draft of the application prepared by Flehr, Hohback, Test, Albritton & Herbert LLP was forwarded to me for review. See Exhibit E.

8. That sometime between February 16, 2001 and January 28, 2002 a review of the draft application was completed and comments were forwarded to Flehr, Hohback, Test, Albritton & Herbert LLP.

9. That on January 28, 2002, a revised draft of the above-referenced application was forwarded to me by Flehr, Hohback, Test, Albritton & Herbert LLP. See Exhibit F.

10. That sometime between January 28, 2002 and the filing date of December 6, 2002, EPRI moved the above-referenced application from Flehr, Hohback, Test, Albritton & Herbert LLP to Dorsey & Whitney LLP. See Exhibit G.

11. That on December 6, 2002, Provisional Application No. 60/431,464 ("464" application) was filed for the above-referenced application with the United States Patent and Trademark Office. See Exhibit G.

Application No. 10/729,428

Eckroad, Steven

Page 3

12. That on December 5, 2003, Application No. 10/729,428 was filed claiming benefit to the '464 application.

13. The Declarant further states that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing therefrom.

Date: August 4, 2008

  
Steven Eckroad

## **EXHIBIT A**

0020682

**DISCLOSURE: Integrated Closed Loop Control Principle for Combined UPS and Generator System**

September 9, 2000

**PATENTS**

TO: Manager, Patents & Licensing, EPRI

**OCT 12 2000**

FROM: Steven Eckroad

SUBJECT: **DISCLOSURE OF DISCOVERY**

In accordance with the EPRI discovery policy, I hereby disclose to the Institute the Discovery described in the succeeding paragraphs of this memorandum of disclosure and in any attachment hereto.

**1. Title of Discovery:**

**Integrated Closed Loop Control Principle for Combined UPS and Generator System**

**2. Identification of inventors:**

- a. Name:
  - 1. Steven Eckroad
  - 2. Franz Joseph Unterlass
  - 3. Martin Hilscher
  - 4. Hans-Christian Doht

- b. Title
  - 1. Project Manager
  - 2. Project Leader
  - 3. Engineer
  - 4. Engineer

- c. Address:
  - 1. 125 Bayview Road, Pacifica, CA 94099, United States
  - 2. Heppstedt 30; ZIP 91325 Adelsdorf, Germany
  - 3. David-Morgenstern-Weg 3; ZIP 91056 Erlangen, Germany
  - 4. Werner-von-Siemens- Str. 19; ZIP 91052 Erlangen, Germany

- d. Citizenship:
  - 1. United States
  - 2. Austria
  - 3. Germany
  - 4. Germany

*This disclosure was read and understood by me on (date).*

*Robert B. Eckroad*  
(Signature of witness)

*9/27/00*  
(Date of signature)

## **EXHIBIT B**

October 18, 2000

0020750

Aldo J. Test, Esq.  
Flehr, Hohbach, Test,  
Albritton & Herbert LLP  
Suite 200  
850 Hansen Way  
Palo Alto, CA 94304-1017

RE: Invention Disclosure entitled "Integrated Closed Loop Principle for Combined UPS and Generator System"  
EPRI No.: KD4481-01-03

Dear Mr. Test:

We are enclosing a copy of the above identified invention disclosure.

We would appreciate your conducting a prior art search covering the disclosure, providing us with an opinion as to patentable subject matter, and providing an estimate of fees and expenses for the preparation and filing of a patent application covering the invention.

If you have any questions concerning the invention, please call.

Very truly yours,



Sumi Yamashita  
Sr. Patent Administrator  
Intellectual Property  
Tel. No. (650) 855-2212  
Fax No. (650) 855-8931

Enclosure

C: S. Eckroad

## **EXHIBIT C**

FLEHR  
HOHBACH  
TEST  
ALBRITTON  
& HERBERT  
LLP

*Intellectual Property Law*

December 4, 2000

0021043

Ms. Sumi Yamashita  
Sr. Patent Administrator  
Electric Power Research Institute  
P.O. Box 10412  
Palo Alto, California 94303

**PATENTS**

**DEC 6 2000**

Phone (415) 781-1989  
Fax (415) 398-3249  
<http://www.flehr.com>

850 Hansen Way  
Suite 200  
Palo Alto, CA 94304-1017  
Phone (650) 494-8700  
Fax (650) 494-8771

Re: Eckroad, et al. Invention Disclosure for:  
INTEGRATED CLOSED LOOP PRINCIPLE FOR COMBINED UPS AND  
GENERATOR SYSTEM  
Your Ref. KD4481-01-03  
Our Ref. A-69958/AJT/SMF

Dear Ms. Yamashita:

Harold C. Hohbach  
Aldo J. Test  
Donald N. MacIntosh  
Edward S. Wright  
David J. Bremer  
Richard E. Backus  
James A. Sheridan  
Robert B. Chickering  
Richard F. Trecartin  
Steven F. Caserza  
Edward N. Bachand  
R. Michael Ananian  
Robin M. Silva  
Michael A. Kaufman  
Maria S. Swiatek  
Karen S. Smith  
Todd A. Lorenz

Robert H. Pinaker, M.D.  
Steven M. Freeland  
Larry Mendenhall  
Diane J. Mason  
William E. Nettle  
Renee M. Kossak  
James J. Diehl  
\*John W. Crosby  
Brian T. Clarke  
(Member of Colorado Bar

TECHNICAL ADVISORS

David C. Foster \*  
Victor E. Johnson \*  
Michael Johnson  
David Rogers  
Julie E. Daniels  
\*Registered Patent Agent  
OF COUNSEL  
Julian Caplan  
Jerry G. Wright

Pursuant to your request, we have conducted a prior art search employing the U.S. Patent and Trademark Office internet search facility directed to the mechanism described in the above-referenced disclosure. In particular, we searched for a UPS or uninterruptible power supply and a generator, and further the concept of using a dual controller monitoring both current and voltage.

We found Patent 5,929,583 which describes a multimode power processor for power generation. We did not find any prior art patents describing the use of a controller for a combined UPS and generator system used in the compensation of voltage disturbances and power interruptions on a transmission line.

It is our opinion, in view of the above, that the invention described in the disclosure dated September 9, 2000 (KD4481-01-03) contains patentable subject matter, namely the dual mode control for a combined UPS and generator system.

Our estimate for the preparation and filing of a patent application covering the above noted invention is about [REDACTED] to [REDACTED] plus costs. Please feel free to call me if you have any questions or comments.

Very truly yours,  
FLEHR HOHBACH TEST  
ALBRITTON & HERBERT LLP

  
Steven M. Freeland

Thomas O. Herbert, Retired  
Paul D. Flehr (1898-1992)  
Elmer S. Albritton (1922-1986)

Enclosure  
1020929

## **EXHIBIT D**

December 8, 2000

0021060

Steven M. Freeland, Esq.  
Flehr, Hohbach, Test,  
Albritton & Herbert LLP  
Suite 200  
850 Hansen Way  
Palo Alto, CA 94304-1017

RE: Invention Disclosure entitled "Integrated Closed Loop Principle for Combined UPS and Generator System"  
FHTA&H No. A-69958/AJT/SMF  
EPRI No. KD4481-01-03

Dear Mr. Freeland:

Thank you for your letter dated December 4, 2000 in which you had provided us with a patentability opinion concerning the above identified invention disclosure.

Based upon your opinion, EPRI wishes to proceed with the preparation and filing of a patent application. If you have any questions regarding the invention, please contact EPRI's Steve Eckroad at (650) 855-1066 (email: [seckroad@epri.com](mailto:seckroad@epri.com)).

Very truly yours,



Sumi Yamashita  
Sr. Patent Administrator  
Intellectual Property  
Tel. No. (650) 855-2212  
Fax No. (650) 855-8931

C: S. Eckroad

## **EXHIBIT E**

FLEHR  
HOHBACH  
TEST  
ALBRITTON  
& HERBERT  
LLP

Intellectual Property Law

February 16, 2001

0021471

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\*Member of Colorado Bar

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\*Registered Patent Agent

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Julian Caplan  
Jerry G. Wright

Thomas O. Herbert, Retired  
Paul D. Flehr (1898-1992)  
Elmer S. Albritton (1922-1988)

Mr. Steven Eckroad  
Electric Power Research Institute  
3412 Hillview Avenue  
Palo Alto, CA 94304-1395

FEB 21 2001

Re: Ecroad et al.  
U.S. Patent Application for *Integrated Closed Loop  
Principle for Combined UPS and Generator System*  
Your Ref.: KD4481-01-03  
Our Ref.: A-69958/AJT/SMF

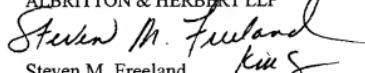
Dear Steve:

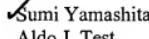
Please find enclosed a preliminary draft of the application including informal figures, background, summary, description of the drawings, and description of the preferred embodiment. Comments to you have been typed in bold throughout the document. Blank spaces, identified with lines, have been provided for additional terms, phrases, or clarification. The claims still need to be added. This material is based primarily on your disclosure dated September 9, 2000. Please review the application and provide comments as to misunderstandings or lack of completeness reflected therein.

When reviewing this draft, please keep in mind that the application must reflect your best mode of implementing the invention at the time the application is filed.

If you have any questions, please call me at (650) 494-8700 or send me a fax message at (650) 494-8771. I can also be reached via e-mail at [sfreeland@flehr.com](mailto:sfreeland@flehr.com).

Yours very truly,  
FLEHR HOHBACH TEST  
ALBRITTON & HERBERT LLP

  
Steven M. Freeland  
kms

SMF:kms 1024651  
Encls.  
cc:   
Sumi Yamashita  
Aldo J. Test

## **EXHIBIT F**

**FLEHR  
HOHBACH  
TEST  
ALBRITTON  
& HERBERT  
LLP**

23967

January 28, 2002

*Intellectual Property Law*

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Erik Y. Oh  
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Kathleen Carroll

\*Member of Martindale-Hubbell  
\*\*Member of Texas Bar

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Daphne L. Reddy  
Michael Van Loy  
Stephanie R. Neutz  
Jennifer Lane  
\*Registered Patent Agent

Thomas O. Herbert, Retired  
Paul D. Flehr (1898-1992)  
Elmer S. Albritton (1922-1988)

Mr. Steven Eckroad  
Electric Power Research Institute  
3412 Hillview Avenue  
Palo Alto, CA 94304-1395

FEB 07 2002

Re: Ecroad, et al.  
Proposed New U.S. Patent Application Entitled: *Integrated Closed Loop Control Method and Apparatus for Combined Uninterruptible Power Supply (UPS) and Generator System*  
Your Ref.: KD4481-01-03  
Our Ref.: A-69958/AJT/SMF

Dear Steve:

In preparation for your meeting on Thursday, January 31, 2002, with Mr. Ananian, we enclose the revised draft of the patent application incorporating your suggested changes.

Please examine the patent application carefully for technical accuracy and completeness. To be complete, the patent application must teach one skilled in your technology area to make and use the invention in the best way known to the inventors at the time we file the application. Be aware that, once the patent application is filed with the patent office, we cannot make substantive changes to the application without compromising certain rights. In the interest of efficiency, let us know all revisions and/or additions, and provide exact word changes whenever possible.

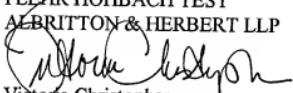
Patent Office regulations require that we identify any prior art that may show or suggest the claimed invention. Accordingly, please provide us with any patents, publications, or product literature that you believe is relevant to the invention and which you have not already disclosed to us. Please note that this duty of disclosure exists throughout the pendency of the patent application.

Mr. Steven Eckroad  
January 28, 2002  
Page 2

Thank you for your assistance with this matter. If you have any questions or comments, please do not hesitate to contact us.

Yours very truly,

FLEHR HOHBACH TEST  
ALBRITTON & HERBERT LLP

  
Victoria Christopher  
for R. Michael Ananian

vcc

cc: Sumi Yamashita ✓  
Aldo J. Test

1031896

## **EXHIBIT G**



Commissioner for Patents  
Washington, DC 20231  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
60/431,464	12/06/2002	160	P- 69958/RMA	22			

CONFIRMATION NO. 8804

R. Michael Ananian  
DORSEY & WHITNEY LLP  
Suite 3400  
Four Embarcadero Center  
San Francisco, CA 94111-4187

FILING RECEIPT



\*OC000000009572783\*

Date Mailed: 02/27/2003

Receipt is acknowledged of this provisional Patent Application. It will not be examined for patentability and will become abandoned not later than twelve months after its filing date. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections, facsimile number 703-746-9195. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Steven Eckroad, Pacifica, CA;

If Required, Foreign Filing License Granted: 02/26/2003

Projected Publication Date: None, application is not eligible for pre-grant publication

Non-Publication Request: No

Early Publication Request: No

Title

Integrated closed loop control method and apparatus for combined uninterruptible power supply (UPS) and generator system

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED